

Prices and Yields Higher in 1996; Record Returns

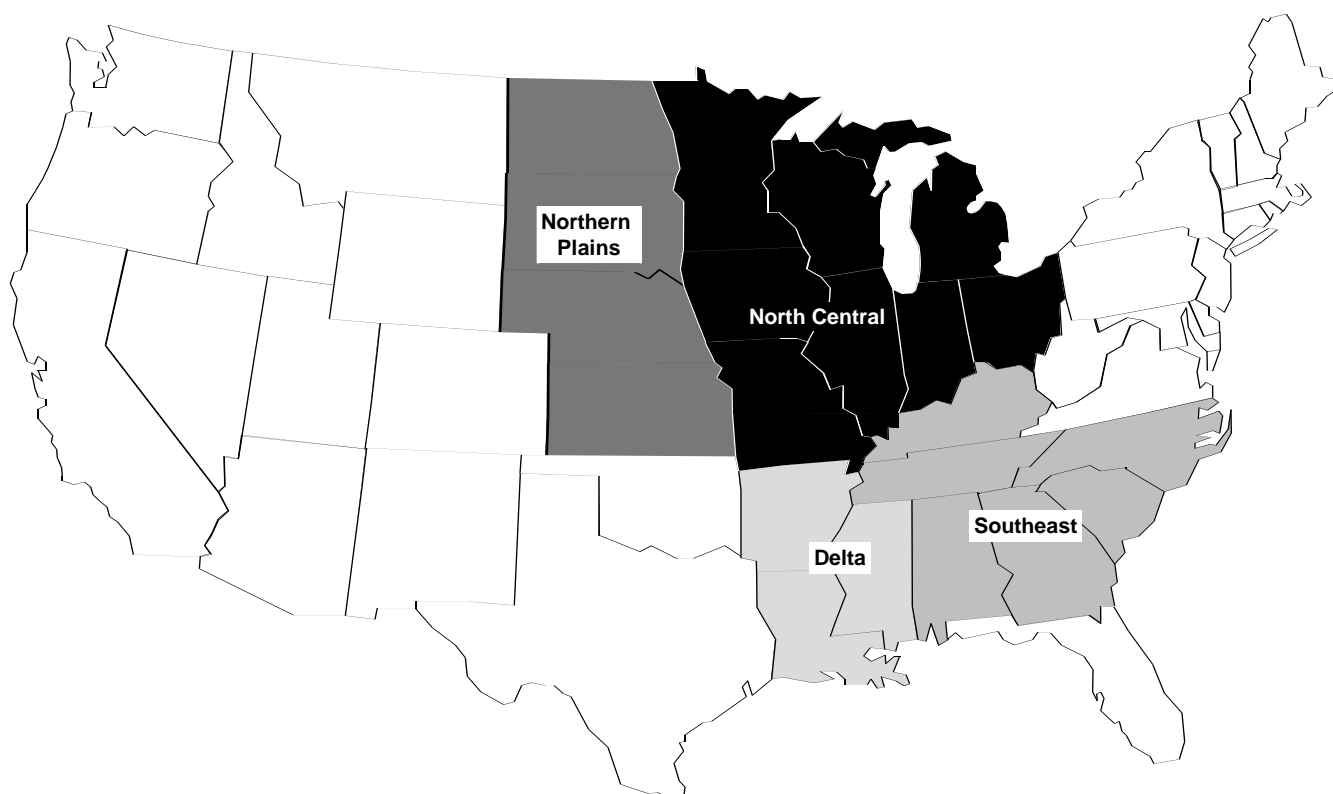
Both prices and yields of soybeans moved higher in 1996, producing record returns. Soybean prices rose above \$8 per bushel in 1996 and settled near \$7 at harvest, up about 10 percent from 1995. Yields were somewhat above the previous 5-year average. Higher prices and yields sent the value of soybeans at harvest above \$250 per acre, a record high. Likewise, average returns above cash costs, at \$130 per acre, were the highest reported since USDA began tracking in 1975. Residual returns to management and risk were the highest reported since 1979. While costs showed only a modest increase, the record returns to soybean production in 1996 suggested incentives for expanded 1997 acreage that were spurred by rising prices in early 1997.

Returns to soybean production improved across the Nation from 1995 to 1996 as a unique set of market conditions led to higher prices and yields in all major production regions. Cash and economic returns in southern production areas were the highest since 1988. Among growers in the Delta, cash returns improved more than 100 percent from 1995 to 1996 and residual returns moved more than \$50 per acre higher. The 1996 harvest price rose about 60 cents from 1995, while a 35-percent increase in yield was the major

force behind a \$1-per-bushel drop in costs. Improved conditions in the Southeast were somewhat less impressive as the harvest price was 40 cents higher and yields were up only about 2 bushels. However, both cash and economic costs in 1996 were down about 20 cents per bushel from 1995.

Stronger soybean prices also improved the 1996 outlook for soybean production in the northern regions, while 20-percent higher yields in the Northern Plains further brightened the situation. In the Northern Plains, the 1996 soybean harvest price was up about 75 cents a bushel from 1995 while production costs were down about 50 cents. The net result was a rise in cash returns of about \$1.25 per bushel and residual returns of nearly \$1.40 per bushel. Unlike in other regions, soybean production costs per bushel in the North Central region were up in 1996 as yields were only slightly higher than in 1995. Cash cost increases were spread evenly among most production items, while economic costs were up due mainly to higher land values. However, the 1996 soybean harvest price was nearly 70 cents higher than in 1995, more than offsetting any cost increases and resulting in the highest cash and economic returns to soybean production since the late 1970's.

Figure 8-2
Soybean production regions



Notes: Shading and patterns indicate production regions where producers were surveyed in 1990 about production practices and costs of production. Production regions are defined for each crop based on common cultural practices.

Table 8-2A—Soybean production cash costs and returns, 1995-96

| Item | United States | | North Central | | Northern Plains | | Southeast | | Delta | |
|--|---------------|--------|---------------|--------|-----------------|--------|-----------|--------|--------|--------|
| | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 |
| <i>Dollars per planted acre</i> | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | |
| Soybeans | 218.54 | 256.36 | 236.69 | 265.55 | 182.50 | 254.69 | 184.39 | 214.76 | 156.63 | 232.47 |
| Total, gross value of production | 218.54 | 256.36 | 236.69 | 265.55 | 182.50 | 254.69 | 184.39 | 214.76 | 156.63 | 232.47 |
| Cash expenses: | | | | | | | | | | |
| Seed | 13.32 | 15.01 | 14.37 | 16.11 | 11.84 | 13.43 | 11.09 | 12.19 | 9.12 | 11.43 |
| Fertilizer, lime, and gypsum | 9.76 | 10.45 | 9.19 | 9.72 | 3.32 | 3.66 | 24.96 | 26.85 | 6.14 | 6.33 |
| Chemicals | 24.82 | 24.95 | 25.99 | 26.16 | 19.79 | 19.95 | 23.57 | 23.5 | 23.96 | 24.16 |
| Custom operations ¹ | 3.65 | 3.65 | 4.04 | 4.04 | 2.44 | 2.41 | 2.29 | 2.38 | 3.81 | 3.88 |
| Fuel, lube, and electricity | 7.64 | 9.45 | 6.68 | 8.22 | 10.12 | 12.51 | 8.80 | 10.55 | 10.71 | 14.06 |
| Repairs | 10.68 | 10.04 | 10.01 | 9.24 | 11.27 | 11.03 | 12.23 | 11.65 | 13.72 | 13.51 |
| Hired labor | 6.01 | 6.40 | 4.63 | 5.02 | 5.45 | 5.66 | 11.59 | 11.76 | 12.20 | 13.00 |
| Other variable cash expenses ² | 0.05 | 0.05 | 0.03 | 0.03 | 0.22 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total, variable cash expenses | 75.93 | 80.00 | 74.94 | 78.54 | 64.45 | 68.87 | 94.53 | 98.88 | 79.66 | 86.37 |
| General farm overhead | 11.58 | 11.44 | 12.69 | 12.59 | 9.72 | 9.51 | 8.12 | 7.96 | 8.97 | 8.83 |
| Taxes and insurance | 18.64 | 19.71 | 21.43 | 22.66 | 15.14 | 15.99 | 11.17 | 12.06 | 8.63 | 9.35 |
| Interest | 15.02 | 15.65 | 17.01 | 17.79 | 13.66 | 14.23 | 7.06 | 7.30 | 9.41 | 9.80 |
| Total, fixed cash expenses | 45.24 | 46.80 | 51.13 | 53.04 | 38.52 | 39.73 | 26.35 | 27.32 | 27.01 | 27.98 |
| Total, cash expenses | 121.17 | 126.80 | 126.07 | 131.58 | 102.97 | 108.60 | 120.88 | 126.20 | 106.67 | 114.35 |
| Gross value of production less cash expenses | 97.37 | 129.56 | 110.62 | 133.97 | 79.53 | 146.09 | 63.51 | 88.56 | 49.96 | 118.12 |
| Harvest-period price (dollars/bu) | 6.26 | 6.91 | 6.25 | 6.91 | 5.96 | 6.72 | 6.52 | 6.95 | 6.62 | 7.26 |
| Yield (bu/planted acre) | 34.91 | 37.10 | 37.87 | 38.43 | 30.62 | 37.90 | 28.28 | 30.90 | 23.66 | 32.02 |

Table 8-2B—Soybean production economic costs and returns, 1995-96

| Item | United States | | North Central | | Northern Plains | | Southeast | | Delta | |
|---|---------------|--------|---------------|--------|-----------------|--------|-----------|--------|--------|--------|
| | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 | 1995 | 1996 |
| <i>Dollars per planted acre</i> | | | | | | | | | | |
| Gross value of production: | | | | | | | | | | |
| Soybeans | 218.54 | 256.36 | 236.69 | 265.55 | 182.50 | 254.69 | 184.39 | 214.76 | 156.63 | 232.47 |
| Total, gross value of production | 218.54 | 256.36 | 236.69 | 265.55 | 182.50 | 254.69 | 184.39 | 214.76 | 156.63 | 232.47 |
| Economic (full ownership) costs: | | | | | | | | | | |
| Variable cash expenses | 75.93 | 80.00 | 74.94 | 78.54 | 64.45 | 68.87 | 94.53 | 98.88 | 79.66 | 86.37 |
| General farm overhead | 11.58 | 11.44 | 12.69 | 12.59 | 9.72 | 9.51 | 8.12 | 7.96 | 8.97 | 8.83 |
| Taxes and insurance | 18.64 | 19.71 | 21.43 | 22.66 | 15.14 | 15.99 | 11.17 | 12.06 | 8.63 | 9.35 |
| Capital replacement | 23.25 | 21.88 | 21.50 | 19.84 | 29.49 | 28.77 | 23.39 | 22.26 | 28.77 | 28.39 |
| Operating capital | 2.12 | 2.04 | 2.10 | 2.00 | 1.80 | 1.75 | 2.64 | 2.51 | 2.23 | 2.20 |
| Other nonland capital | 13.62 | 12.13 | 13.45 | 11.78 | 14.91 | 13.79 | 12.51 | 11.42 | 14.45 | 13.53 |
| Land | 55.30 | 65.63 | 62.29 | 71.53 | 48.39 | 69.28 | 31.38 | 37.10 | 33.92 | 44.29 |
| Unpaid labor | 19.35 | 20.94 | 20.37 | 22.25 | 20.73 | 21.70 | 15.75 | 16.63 | 12.56 | 13.60 |
| Total, economic (full ownership) costs | 219.79 | 233.77 | 228.77 | 241.19 | 204.63 | 229.66 | 199.49 | 208.82 | 189.19 | 206.56 |
| Residual returns to management and risk | -1.25 | 22.59 | 7.92 | 24.36 | -22.13 | 25.03 | -15.10 | 5.94 | -32.56 | 25.91 |
| Harvest-period price (dollars/bu) | 6.26 | 6.91 | 6.25 | 6.91 | 5.96 | 6.72 | 6.52 | 6.95 | 6.62 | 7.26 |
| Yield (bu/planted acre) | 34.91 | 37.10 | 37.87 | 38.43 | 30.62 | 37.90 | 28.28 | 30.90 | 23.66 | 32.02 |

¹Cost of custom operations and technical services.²Cost of purchased irrigation water.

Source: Economic Research Service, U.S. Department of Agriculture.